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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/729,701	12/06/2000	Yutaka Maruyama	1232-4475US1	6870

7590 12/10/2003

MORGAN & FINNEGAN, L.L.P.
345 Park Avenue
New York, NY 10154

EXAMINER

TUGBANG, ANTHONY D

ART UNIT	PAPER NUMBER
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3729

DATE MAILED: 12/10/2003

8

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/729,701

Applicant(s)

MARUYAMA ET AL.

Examiner

A. Dexter Tugbang

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 22 September 2003.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 14-22 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☐ Claim(s) _____ is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 22 September 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. §§ 119 and 120

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☒ Certified copies of the priority documents have been received in Application No. 09/162,378.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 13) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.
- a) ☐ The translation of the foreign language provisional application has been received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

Attachment(s)

- ☐ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____
- ☐ Interview Summary (PTO-413) Paper No(s). _____
- ☐ Notice of Informal Patent Application (PTO-152)
- ☐ Other: _____

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DETAILED ACTION

Response to Amendment

1. The applicants' amendment filed 9/22/03 (Paper No. 7) has been fully considered and made of record.
2. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Drawings

3. The drawings were received on 9/22/03 (Paper No. 7). These drawings are have been approved by the examiner.

Claim Rejections - 35 USC § 102

4. Claims 14-17 and 22 are rejected under 35 U.S.C. 102(b) as being anticipated by Japanese Patent Publication JP 4-49872, referred to hereinafter as JP'872.

JP'872 discloses a vibration type driving apparatus comprising the following structure: a vibration member (in Figs. 2 and 3); a contacting member 22; and a friction member having a resin composition (carbon fiber reinforced resin complex) of a heat-resisting resin and a mesophased pitch carbon fiber (see CONSTITUTION), which meets all of the limitations of the claimed invention.

Regarding Claims 15 and 16, the carbon fiber of JP'872 is considered to be a "short fiber" and "carbonic" to the extent that the composition is treated with materials of carbon and is mixed with a resin.

Regarding Claim 17, JP'872 teaches a range of mesophased pitch carbon fiber of 10-70% by weight, which is inclusive of the claimed range of 10-30% by weight.

Regarding Claim 22, the vibration type driving apparatus of JP'872 is used as a drive source in a motor (see PURPOSE).

Claim Rejections - 35 USC § 103

5. Claims 18-21 are rejected under 35 U.S.C. 103(a) as being unpatentable over JP'872 in view of Tamai et al 5,380,805.

JP'872 discloses the claimed apparatus as previously discussed, and further including that the friction member is molded. JP'872 does not teach the specific resin compositions recited in each of Claims 18-21.

Tamai teaches various resin compositions including: a fluororesin, a polyimide resin, molybdenum disulfide, and a polyimide powder (see col. 39, lines 3+) for the benefits of improving wear resistance of a molded material (see col. 17, lines 13+).

It would have been obvious to one of ordinary skill in the art at the time the invention was made have modified the molded friction member of JP'872 by utilizing the various composition of molded resins, as taught by Tamai, to positively improve wear resistance of the vibration type driving apparatus.

Response to Arguments

6. Applicant's arguments filed 9/22/03 (Paper No. 7) have been fully considered but they are not persuasive.

In regards to the merits of JP'872, the applicants' urge that JP'872 does not teach a friction member that is "formed of a resin composition containing heat-resisting resin and mesophased pitch carbon fiber" (as required in Claim 14).

The examiner most respectfully traverses. But first, the examiner would like to thank the applicants' for noting that element 24, not element 21, is what contains the carbon fiber reinforced complex. In the previous Office Action (Paper No. 5, paragraph No. 4), a typographical error occurred in the recitation of elements 21, 24. The recitation of these elements from the previous Office Action was inadvertent and should have been switched. The examiner's position is that element 24, i.e. the moving body 24, is what should be read as the claimed "friction member", particularly since the makeup or composition of the moving body is a carbon fiber reinforced complex and the previous Office Action does explicitly recite that the *carbon fiber reinforced complex* (in parentheses) is equivalent to the claimed "resin composition" inclusive of the "heat-resistant resin and mesophased pitch carbon fiber". Element 21 is what should be read as the claimed "vibration member", particularly since element 21 vibrates or oscillates as an oscillating member 23. It is noted that in JP'872's Figure 2, the contacting member 22 directly contacts the vibration member 21 and the friction member 24 is on a contacting portion (upper surface) of the vibration member 21.

Being that that moving body 24 is read as the claimed "friction member", the examiner simply fails to see how a resin composition of "carbon fiber reinforced resin complex" is not equivalent to a resin composition of "heat-resistant resin and mesophased pitched carbon fiber". The CONSTITUTION of JP'872 uses the literal terms of *carbon fibers* and *resin* to form a complex composition. The resin portion of the complex would inherently be heat-resistant at

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least to the extent that the claims do not require to what extent the resin must be heat resistant or the claims do not recite any interconnection with temperature that effects the resin portion of the composition. Since there is a mixture of carbon fibers in the resin composition, the carbon fibers can be said to be “mesophased pitched” in relationship to the resin portion. Therefore, the examiner’s position is that the resin composition of “carbon fiber reinforced resin complex” is equivalent to the resin composition of “heat-resistant resin and mesophased pitched carbon fiber”.

In response to applicant's argument that there is no suggestion to combine the references of JP’872 and Tamai et al, the examiner recognizes that obviousness can only be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggestion, or motivation to do so found either in the references themselves or in the knowledge generally available to one of ordinary skill in the art. See *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988) and *In re Jones*, 958 F.2d 347, 21 USPQ2d 1941 (Fed. Cir. 1992). In this case, JP’872 and Tamai share the common problems associated with resin compositions with Tamai having associated advantages therewith.

Conclusion

7. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after

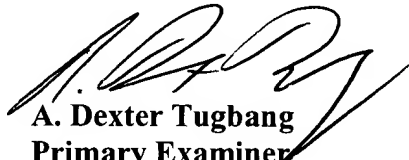
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the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dexter Tugbang whose telephone number is 703-308-7599. The examiner can normally be reached on Monday - Friday 9:00 am - 6:30 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Peter Vo can be reached on 703-308-1789. The fax phone numbers for the organization where this application or proceeding is assigned are 703-872-9302 for regular communications and 703-872-9303 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0858.



A. Dexter Tugbang
Primary Examiner
Art Unit 3729

December 9, 2003